

Remarks/Arguments:

Amendments

The claims have been amended to more particularly point out and distinctly claim the subject matter that applicants regard as the invention. Support for the amendment to claim 1, step b), is found on page 5, lines 21-25. Support for new claim 17 is found page 4, lines 28-29, and in Examples 1-4. Support for new claim 18 is found on page 4, lines 16-18, and in original claim 2. Support for new claim 19 is found in original claims 9, 10, and 11. Support for new claim 19 is found in original claim 7. It is submitted that no new matter is introduced by these amendments and new claims.

Rejection under 35 USC 102(b)

Claims 1-11 were rejected as anticipated by Yang, U.S. Patent 6,239,209 ("Yang"). This rejection is respectively traversed.

Applicants' claims are method claims directed to a process for forming a poly(urethane-co-acrylic) copolymer dispersion. The process forms a linear, multi-block co-polymer made up of alternating polyvinyl and polyurethane blocks. See, specification, page 3, lines 11-12 ("synthesis of a coating material, having both polyurethane and vinyl polymer in the same backbone") (emphasis added). The process uses controlled addition of vinyl monomers to a polyurethane containing iniferter groups to control the properties of the polymer. *Id.*, page 2, lines 21-26. The process uses iniferter technology, a living radical polymerization technique, to produce the linear, multi-block co-polymer *Id.*, page 5, lines 21-25.

As the Office admits, Yang produces an interpenetrating polymer network. Office action, page 2, lines 20-21. An interpenetrating polymer network is, "a first polymer network intertwined on a molecular scale with a second polymer network." Yang, column 3, lines 42-44; see, also . This is not a linear, multi-block co-polymer.

In fact, Yang expressly teaches against the use of linear polymers as having insufficient chemical resistance for coating applications. Yang, column 1, lines 44-46, lines 56-61, and lines 62-64; and column 2, lines 40-46, lines 57-62. Yang's objective is to produce cross-linked and cross-linkable polymers. *Id.*, column 3, lines 28-33. This is also

apparent from use of the term "air curable" to describe the polymers. *Id.*, column 3, line 35.

As the Office admits, Yang uses a free radical initiator, such as an azo compound, to initiate polymerization of the free radical polymerizable monomer. Office action, page 4, lines 13-16; see, Yang, column 6, lines 11-14; column 7, lines 36-38; column 8, lines 51-53; column 9, lines 66-67; and column 11, lines 1-2. This is conventional free radical polymerization, in which there is no control over polymer molecular weight, architecture, and end groups. Specification, page 2, lines 4-8.

In contrast, applicants process uses the iniferter living radical method of free radical polymerization. Specification, page 5, lines 21-25. The isocyanate terminated pre-polymer is reacted, for example, with tetraphenylethane diol. Specification, page 6, lines 1-3. The thus formed iniferter thermally dissociates to form radicals. *Id.*, page 2, lines 18-26. Because the iniferter has been incorporated into the urethane polymer by reaction of, for example, tetraphenylethane diol, with an isocyanate terminated pre-polymer, vinyl monomers are incorporated into the polymer. As the process continues, further vinyl monomer units are incorporated into the polymer to form a vinyl block. A linear polymer, containing alternating polyvinyl and polyurethane blocks is formed.

Such a process is neither disclosed or suggested by Yang.

Anticipation requires that each and every limitation of the claim be disclosed, either expressly or under principles of inherency, in a single prior art reference. *In re Robertson*, 49 USPQ2d 1949, 1950-51 (Fed. Cir. 1999). Absence from the reference of any claimed limitation negates anticipation. *Rowe v. Dror*, 42 USPQ2d 1550, 1553 (Fed. Cir. 1997). Because Yang does not disclose or suggest formation of linear, multi-block co-polymer made up of alternating vinyl and urethane blocks using the iniferter living radical method of free radical polymerization, the rejection of claims 1-11 as anticipated by Yang should be withdrawn.

Conclusion

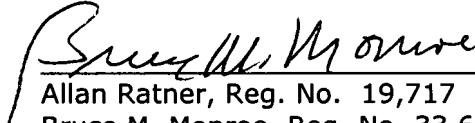
It is respectfully submitted that the claims are in condition for immediate allowance and a notice to this effect is earnestly solicited. The Examiner is invited to phone applicant's

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attorney if it is believed that a telephonic or personal interview would expedite prosecution of the application.

Respectfully submitted,


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